Pronunciation of English Fricatives by Indonesian EFL Learners: Patterns and Pedagogical Implications

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Abstract

Pronunciation plays a vital role in oral communication; yet, many Indonesian learners of English as a Foreign Language (EFL) continue to face difficulties, particularly in articulating fricative consonants that are absent from their native language. This study investigates the pronunciation problems experienced by second-semester students of the English Department at Makassar Muhammadiyah University, with a specific focus on English fricative consonants. Employing a mixed-method approach, data were gathered through a pronunciation test, interviews, and audio recordings. The findings indicate that dental fricatives /θ/ and /ð/ are the most problematic, often substituted with /t/ and /d/ due to first-language interference and limited exposure to pronunciation models. Additional contributing factors include a lack of articulatory awareness, insufficient phonetic training, and minimal practice. These results suggest the need for more explicit instruction and guided pronunciation practice to improve learners' phonological competence. The study provides practical insights for English instructors to enhance pronunciation-focused pedagogy and curriculum development.

Keywords: pronunciation, fricative consonants, dental sounds, EFL learners, phonetic training

1. Introduction

English serves as a global lingua franca and plays a crucial role in communication, education, technology, and international business. In Indonesia, the importance of English has grown significantly alongside the expansion of digital communication and access to global information, much of which is presented in English. Among the four fundamental language skills, listening, speaking, reading, and writing, speaking is particularly vital for real-time interaction and interpersonal communication. Within the domain of speaking, pronunciation is essential to ensure intelligibility, clarity, and effective expression of meaning (Kangatharan et al., 2023). Thus, mastering pronunciation is central to improving communicative competence among EFL learners.

One of the persistent challenges faced by Indonesian learners of English as a Foreign Language (EFL) is the accurate pronunciation of English fricative consonants. These sounds, such

as /f/, /v/, /θ/, /ð/, /ʃ/, and /ʒ/, are often absent in Bahasa Indonesia, leading to frequent mispronunciations due to first language interference. As highlighted by Luthfianda et al. (2024), the inability to produce these sounds correctly stems from a lack of phonological equivalence between the learners' native language and English. Similar findings were reported by local studies, including Mada (2025), who discovered that students frequently substituted /θ/ and /ð/ with /t/ and /d/, leading to intelligibility problems in oral communication. In a study conducted by Nurhayati (2020), EFL learners in East Java also exhibited low awareness of fricative articulation, particularly for voiced dental and palato-alveolar sounds.

Despite its importance in communication, pronunciation remains underemphasized in many English classrooms in Indonesia. Learners often receive minimal instruction in articulatory phonetics and phonemic awareness, resulting in poor production of unfamiliar consonants. Passive exposure through media such as music or movies, although helpful, is rarely sufficient to develop precise pronunciation skills without explicit practice and corrective feedback. As a result, many students continue to experience difficulty producing unfamiliar consonants accurately.

Previous studies have explored this issue from various perspectives. Pakpahan (2023) found that dental fricatives /θ/ and /ð/ posed particular difficulties for Indonesian students, who commonly replaced them with /t/ and /d/. Similarly, Adhani et al. (2021) and Luthfianda et al. (2024) reported high error rates in the production of fricatives such as /ʃ/, /ʒ/, and /v/, with consistent evidence of substitution errors influenced by the learners' first language. These mispronunciations were largely attributed to L1 interference and lack of articulatory training. However, previous research often focused narrowly on qualitative methods or specific student groups in major urban centers.

While earlier research has provided valuable insights into these pronunciation difficulties, many studies have been limited in scope, focusing either on qualitative analysis or specific regional accents. This study seeks to build on that foundation by adopting a mixed-methods approach to examine pronunciation challenges across five categories of English fricatives (labiodental, dental, alveolar, palato-alveolar, and glottal) among second-semester EFL students at Makassar Muhammadiyah University.

The present research aims to identify the most problematic fricative sounds for students and explore the underlying factors contributing to their mispronunciations. The findings are expected to offer practical implications for pronunciation instruction and phonology-based curriculum development in Indonesian higher education.

1.1 Theoretical Background on ELF Pronunciation

Speaking is a core productive skill involving the real-time construction and delivery of verbal messages. As Zeynally (2022) explains, speaking involves producing systematic utterances to convey meaning, and according to Manurung (2019), it is a skill that develops early in life, often in tandem with listening. In the context of English as a Foreign Language (EFL), the ability to speak fluently is crucial for effective classroom communication and real-world interactions.

Pronunciation plays a crucial role in achieving clarity, fluency, and intelligibility in spoken communication. Pronunciation encompasses various aspects such as intonation, stress, and articulation (Saito, 2021). Among the many challenges EFL learners face, the accurate

production of fricative consonants remains one of the most persistent, especially when these sounds do not exist in the learners' first language.

English fricatives are produced by forcing air through a narrow constriction in the vocal tract, creating friction. There are nine fricative phonemes in English: /f/, /v/, /θ/, /ð/, /s/, /z/, /ʃ/, /ʒ/, and /h/, which are grouped into voiceless (fortis) or voiced (lenis) (Lee, 2023).

These fricatives can be categorized based on their place of articulation: labiodental /f/ and /v/ (e.g., fan, van), dental /θ/ and /ð/ (e.g., think, this), alveolar /s/ and /z/ (e.g., sip, zip), palato-alveolar /ʃ/ and /ʒ/ (e.g., shoe, measure), and glottal /h/ (e.g., hat).

For Indonesian EFL learners, dental and palato-alveolar fricatives are particularly challenging due to their absence in Bahasa Indonesia's phonemic inventory. Learners often replace these unfamiliar sounds with more familiar ones from their native language.

Kelly (2022) outlines several key factors contributing to learners' pronunciation difficulties, including L1 interference, physical unfamiliarity with articulatory processes, inconsistent spelling-to-sound correspondence in English, and limited auditory exposure.
Berent et al. (2023) further emphasize that difficulty often arises when learners are unable to express their phonological knowledge due to the abstract and motoric demands of unfamiliar sound systems, especially in the case of fricatives, which require precise articulatory control. Indonesian studies by Zannah et al., (2023) and Yulia & Saukah (2021) similarly found that pronunciation training is often neglected, with limited instructional time devoted to phonetic drills or articulatory practice.

In Summary, effective pronunciation, especially of fricative consonants, requires explicit instruction, metalinguistic awareness, and repeated articulatory practice. These aspects are often overlooked in EFL classrooms in Indonesia, underscoring the need for more targeted and informed pedagogical approaches in teaching English phonology.

2. Methodology

2.1 Research Design

This study employs a mixed-method approach that integrates both quantitative and qualitative techniques to investigate the pronunciation difficulties encountered by EFL students, specifically in the articulation of English fricative consonants. The quantitative component evaluates students' accuracy through pronunciation test results, while the qualitative component explores learners' perceptions and experiences through interviews. As a descriptive study, it aims to identify, classify, and explain the patterns of mispronunciation, as well as to offer pedagogical insights for more effective pronunciation instruction.

2.2 Variables and Indicators

The primary variable in this study is students' ability to pronounce English fricative consonants. These include labiodental (/f/, /v/), dental (/θ/, /ð/), alveolar (/s/, /z/), palato-alveolar (/ʃ/, /ʒ/), and glottal (/h/) sounds. The indicators used to measure this variable are:

1. The ability to articulate fricative sounds accurately in initial, medial, and final word positions.
2. The frequency and types of mispronunciation, such as substitution, omission, or distortion.

3. Students' reported challenges and the factors contributing to their difficulties.

2.3 Participants

The participants in this study were second-semester students from the English Department at Makassar Muhammadiyah University. The total population consisted of approximately 350 students across ten parallel classes (BG II A to BG II J). Using random sampling, five students were selected from each of the first seven classes (BG II A-G), resulting in a sample of 35 participants. This sampling strategy ensured both diversity and representativeness, while minimizing selection bias.

2.2 Research Instruments

Three research instruments were used to collect data:

a. Pronunciation Test
Students were given a list of 15 English words that contained various fricative consonants. They were instructed to read the words aloud while being recorded.

b. Audio Recording

The pronunciation sessions were recorded to facilitate repeated analysis, allowing for the accurate identification of mispronunciation patterns.

c. Interview

Semi-structured interviews were conducted to explore students' perceptions regarding their pronunciation difficulties and their approaches to learning fricative sounds. This format provided flexibility while maintaining consistency in core questions.

2.3 Data Collection Procedures

Data collection was conducted in three sequential stages:

1. Pronunciation Test
Participants read aloud a standardized list of words, each representing different categories of English fricative consonants. The selected words reflected common vocabulary items to ensure familiarity and reduce lexical bias.
2. Recording and Transcription
Each participant's pronunciation was recorded and then transcribed phonetically. The transcriptions were used to identify specific errors in the production of fricative consonants.
3. Interview
Following the pronunciation test, students were interviewed individually to provide qualitative insights into their pronunciation awareness, experiences with English phonemes, and the challenges they encountered.

2.4 Data Analysis Techniques

Data were analyzed using both quantitative and qualitative methods:

1. Pronunciation Test Analysis

Recordings were reviewed to evaluate the accuracy of each fricative sound. Errors were categorized by type (e.g., substitution of /θ/ with /t/), and frequency was calculated for each error type.

2. Interview Analysis
   Thematic coding was applied to the interview transcripts to identify common themes related to learners' challenges, strategies, and perceptions.
3. Triangulation
   Data from pronunciation tests, recordings, and interviews were triangulated to ensure the validity and reliability of findings and to provide a comprehensive understanding of the problem.

3. Results and Discussion

This section presents the findings of the study based on the pronunciation tests and interviews conducted with second-semester students of the English Department at Makassar Muhammadiyah University. The results are organized according to the two research questions:

1. What problems do students face in pronouncing English fricative consonants?
2. Which fricative consonants are most commonly mispronounced?

3.1 Students' Problems in Pronouncing English Fricative Consonants

The qualitative data obtained from interviews were thematically categorized into three domains: students' ability, students' knowledge, and difficulties related to the pronunciation of English fricative consonants.

a. Students' Ability

Most students reported relying on passive exposure, such as watching English language movies and listening to music, to improve their pronunciation. A few students also mentioned using dictionaries to check phonetic transcriptions, though this practice was inconsistent.

Sample responses included:

"I often watch English movies and listen to songs to learn how to pronounce words."

"I need to look at the dictionary to pronounce fricative correctly."

Despite these efforts, students continued to struggle with accurate articulation, particularly for fricative sounds not found in their native language. This suggests that passive exposure alone is insufficient for developing precise pronunciation skills, especially without structured practice and feedback.

b. Students' Knowledge

When asked to define or identify types of fricative consonants, only 10-15% of the students were able to respond correctly. Although many students had heard of the term "fricative," most could not explain or categorize these sounds accurately.

Typical student statements included.

"I've heard of fricative consonants, but I don't remember what they are."

"Maybe it's the way you pronounce some English words?"

These responses reflect a lack of metalinguistic awareness and limited retention of prior phonetics instruction. It also indicated that the concept of fricative sounds may not be sufficiently emphasized in the classroom.

3. Students' Difficulties

Students identified several contributing factors to their pronunciation difficulties, including:

- Limited focus on pronunciation in their previous schooling.
- Minimal opportunities to use English in daily interactions.
- Confusion caused by inconsistent English spelling-to-sound patterns.
- Difficulty in articulating unfamiliar sounds, especially dental and palato-alveolar fricatives.

One student commented:

> "In high school, we never learned about pronunciation transcriptions, so I don't know how to pronounce some sounds."

These findings reveal broader issues within EFL instruction in Indonesia, where vocabulary and grammar are often prioritized over phonological awareness and articulatory training.

3.2 Most Commonly Mispronounced Fricative Consonants

The quantitative data from the pronunciation tests of 35 students revealed consistent patterns of error, particularly with the dental fricatives /θ/ and /ð/. These sounds were the most frequently mispronounced, with over half of the participants substituting /θ/ with /t/ and /ð/ with /d/, consistent with previous studies (e.g., Tiono & Yostanto, 2008) and supporting the theory of first language interference, as Bahasa Indonesia does not include these sounds.

Examples include:

- think /θɪŋk/ → pronounced as tink
- this /ðɪs/ → pronounced as dis

This substitution pattern supports the theory of first-language interference, as Bahasa Indonesia does not contain the /θ/ or /ð/ sounds. Learners instinctively replace these unfamiliar fricatives with more familiar plosives from their L1 phonetic system.

Additional observations include:

- Labiodental sounds (/f/, /v/) and alveolar sounds (/s/, /z/) were generally produced correctly.
- Palato-alveolar fricatives (/ʃ/, /ʒ/) showed moderate difficulty, with /ʒ/ being more problematic, likely due to its rarity and limited exposure in everyday English input.
- Glottal fricative /h/ was largely produced accurately, although in some cases it was omitted or softened, possibly influenced by regional accents.

These results suggest a correlation between pronunciation accuracy and the frequency or familiarity of the sound within the learners' native language environment.

Below is the summary of the pronunciation test results:

Table 1. Frequency of Mispronounced English Fricative Consonants (n = 35)

Fricative Sound	Example Word	Common Mispronunciation	No. of Students	Percentage (%)
/θ/	think	/tɪŋk/	25	71.4%
/ð/	this	/dɪs/	22	62.9%
/ʒ/	measure	/mesər/ or /meʃər/	15	42.9%
/ʃ/	shoe	/su:/ or /sju:/	10	28.6%
/v/	van	/fan/	6	17.1%
/h/	hat	omitted/softened	5	14.3%
/f/, /s/, /z/	fan, sip, zip	Mostly correct	0-2	<6%

Note: Some students made multiple errors across different fricative categories.

The findings of this study reinforce established research in second language phonology. As noted by Maspufah & Diana (2022), certain fricative sounds, particularly /θ/ and /ð/ are typically acquired late, even by native English-speaking children. Consequently, such sounds pose even greater challenges for EFL learners with no equivalent in their L1 (Hung & Yan, 2021).

Turner (2023) emphasized that phonetically marked or unfamiliar sounds tend to be more difficult to acquire. This is evident in the Indonesian students' inability to distinguish between the voiced and voiceless dental fricatives, resulting in substitutions that may impede intelligibility.

Moreover, Kelly (2022) underscores the importance of auditory discrimination and articulatory practice in developing accurate pronunciation. While the students in this study reported exposure to English through media, their productive skills remain underdeveloped due to the lack of structured, pronunciation-focused instruction.

The results imply a pressing need to incorporate explicit phonetic training in the EFL curriculum. Emphasis on articulatory features, supported by listening and production activities, could enhance learners' awareness and control over fricative consonant production.

4. Conclusion

This study confirms that English fricative consonants, particularly the dental fricatives /θ/ and /ð/, are the most frequently mispronounced sounds among Indonesian EFL learners. More than 70% of students replaced these sounds with /t/ and /d/, respectively, indicating a strong influence of first-language interference due to the absence of these fricatives in Bahasa Indonesia. Other sounds such as /ʒ/, /ʃ/, and /v/ also posed challenges, though to a lesser extent. In contrast, more familiar sounds like /f/, /s/, and /z/ were generally pronounced correctly.

These findings highlight critical gaps in pronunciation instruction within the Indonesian EFL context. While students reported frequent exposure to English through media, such passive input proved insufficient for developing accurate pronunciation. The results suggest that explicit phonetic instruction, auditory discrimination training, and articulatory practice are essential for helping learners overcome pronunciation difficulties.

Therefore, pronunciation must be treated not as a peripheral skill, but as a core component of communicative competence. Teachers are encouraged to design classroom activities that include focused phonetic training, the use of phonetic transcription, and consistent corrective feedback. Integrating these elements into the curriculum will not only improve learners' pronunciation accuracy, especially of problematic fricative consonants, but also build their confidence and intelligibility in real-world communication.

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